

Geological Information

The rocks underlying Greensand Country are the sandstones, loose sands and clays of the Woburn Sands Formation, part of the Cretaceous Lower Greensand Group (deposited 125 - 113 million years ago (mya)).

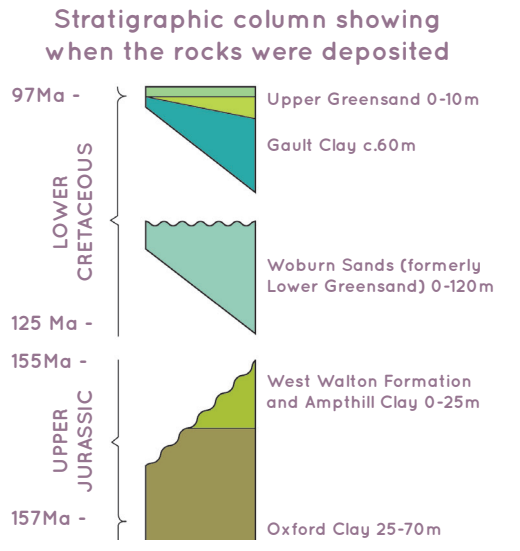
Despite its informal name of Greensand, the sands vary in colour from white, yellow and orange to a dark red-brown due to the varying iron content cementing the grains together. The quality is high and it has been quarried extensively in the Leighton Buzzard area. The sandstone contains much more iron and it resists erosion, forming high ground which contrasts with lower ground west and north of the Ridge. It has been used for building stone. Soils are acidic supporting abundant plantations of coniferous trees and heathland plants. As rainfall soaks into the ground, streams and ponds are generally absent.

The Woburn Sand Formation rests on older, Jurassic (201-145 mya) rocks. On this geotrail, the lowest parts of the route, (P3 and 6) descend onto Ampthill Clay. This impervious grey mudstone was deposited as silt by rivers in a shallow sea and dates between 164 -157. It contains fossils of belemnites, ammonites and *Gryphaea*, a bivalve similar to today's oysters. Beneath this is Oxford Clay which lies beneath the clay vale visible from Point 10 and was used for making bricks in the Marston Vale south and west of Bedford.

The highest parts of the geotrail venture onto much younger, glacial Boulder Clay containing flints and other erratic stones. Soils on Boulder Clay are more fertile but less well drained and ponds are abundant. It was deposited on the older rocks at the peak of an Ice Age during the Anglian advance about 400,000 years ago, the only time that an ice sheet reached this far south in England. During these colder conditions, the Greensand froze. During thaws, it was more easily eroded by meltwater and steep-sided valleys (P18) were formed. These are now dry.

Iron pans

These very dark horizons have a very high iron content. During deposition of the Lower Greensand in a shallow sea, they formed when dissolved iron compounds leached out and deposited a layer of concentrated impermeable, hard, rusty iron.



Bedfordshire Geology Group

Formed in 2004 by a group of amateur and professional geologists aiming to encourage an understanding of the rocks and landforms of the county for the benefit of all.
For more information, contact us through our website www.bedfordshiregeologygroup.org.uk or by email to secretary@bedfordshiregeologygroup.org.uk

Greensand Country

Defined by the Greensand Ridge, a band of higher ground stretching from Leighton Buzzard to Gamlingay, which rises out of the surrounding clay vales, Greensand Country contains all of Bedfordshire's remaining heathland, more than half of its woodland and more historic parkland than anywhere else in the country. It is rich in wildlife and cultural heritage, with miles of footpaths and bridleways. Greensand Country is recognised as a highly attractive landscape with a unique history, wildlife and culture encouraging people to visit, enjoy, understand, value and look after for the long term. Greensand Country Landscape Partnership is led by Bedfordshire Rural Communities Charity and local environment charity, The Greensand Trust, and is funded by National Lottery Heritage Fund. It is made possible by National Lottery players; without them we couldn't fund the project.

For more information on the Greensand Country Landscape Partnership email team@greensandcountry.com or telephone 01234 838774.

The information here is believed to be correct at the time of publication (2020)



Western Geotrail

Earth Heritage of Greensand Country



This leaflet has been developed by Bedfordshire Geology Group in partnership with Greensand Country Landscape Partnership to bring our landscape and heritage alive.



Route Map



Introduction

This circular geotrail over the Greensand Ridge in the west of Greensand Country uses public footpaths and pavements. It traverses the forests and heathlands of Rushmere Country Park and incorporates open fields, streams and country lanes around the village of Great Brickhill. The route is nearly 5 miles (8 km) long, starting at Heron's View Visitor Centre in Rushmere Country Park (charge for parking), postcode LU7 0EB, OS Sheet Explorer 192 reference SP912284.

Please observe The Countryside Code <https://www.gov.uk/government/publications/the-countryside-code>.

Note: Follow the directions carefully as there are many paths in Rushmere Country Park.

- 1. Leave the Visitor Centre and cross the picnic area diagonally, taking the path to the right of the large oak tree. Turn left at the next waymark post where the paths form a crossroads. Note the red-brown iron-rich sand in the path 1.
- 2. Continue towards the edge of Oak Wood and turn R, joining the Greensand Ridge Walk (GRW). Enjoy views 2 (left) across the Ouzel valley which marks the southwestern end of the Greensand Ridge.
- 3. As you descend on your right is a cycle route 3 which passes through linear depressions, probably former sandpits, that reveal iron pans in places.
- 4. Go downhill and through a kissing gate. Walk over a small bridge past Black Pond on your right 4. Water flowing through the Woburn Sands reaches impermeable Amphill Clay beneath collecting in Black Pond which feeds a stream draining into the River Ouzel.
- 5. Bear left up wide-spaced steps; veer right following the bridleway. 5 Near the metal public bridleway post is an exposure of Woburn Sands. Continue along the bridleway.
- 6. Turn left at the crossroads towards Gt Brickhill; take the right fork NOT the cycle path. 6 Brambles and, in Spring, bluebells grow; preferring alkaline soil provided by a covering of Boulder Clay.

Dick Turpin’s Hideaway

The infamous highwayman, Dick Turpin (1705-1739), local legend suggests, hid in this cave during his flight from London to York following his Essex Gang’s arrest in 1735. Although there is no evidence of Dick Turpin having passed this way, there is evidence of another highwayman circa 1100,



13: Dick Turpin’s hideaway

Dunne of Dunstable, who could have been in this area and used it as a hidey-hole as he attacked travellers on the road between St Albans and Towcester.

“And for that Dunne, before the woods was downe, Had there his haunte, and thence did steale away, The staple and the ringe, thereof the towne, Is called Dunstable until this daye”

- 7. After leaving woodland via the kissing gate 7 note a clump of trees (right) around a former quarry (private land, no access).
- 8. Cross a meadow then downhill towards a stream and descending onto the impermeable Jurassic clays.
- 9. Turn right through a gate crossing the stream via a bridge. Continue along the track entering Gt Brickhill. 8 Many garden walls and buildings use local sandstone.
- 10. Head towards the Old Red Lion pub passing ‘The Three Trees’ traffic island with large locally-quarried boulders. 9 The largest boulder with its pebbly texture is indicative of the upper boundary of the Woburn Sands.
- 11. Cross the road, visit the pub. 10 Enjoy views from the garden which is on the crest of the Greensand Ridge escarpment that dips sharply onto the Jurassic Clay vale.
- 12. Leave the pub and retrace your steps and bear left down Heath Road following the signpost towards Heath & Reach. (Take care with traffic on this narrow road). 11 Beyond the village is ‘Poor’s Acre Pocket Park’, a partially infilled ‘Sand Hole’ or quarry.
- 13. After visiting Poor’s Acre Park, continue down the road and take the footpath through Blue Gate Farm continuing along the track to a stile.
- 14. Generally follow the power lines through the hedge crossing two pastures until you reach an arable field which takes advantage of the productive soil above Boulder Clay that covers the Greensand here.



4: Pond



5: Ditch showing Woburn Sands

- 15. Keep to the right in the field. 12 Note a series of depressions, dew ponds, behind the fence on the right that fill with water after rain.
- 16. At the bottom corner of the field go over a stile, taking care on the steep slope. Turn right through the gate onto the bridleway. 13 On the left, for 75m, are the best exposures of Woburn Sands on this walk. One resembles a small cave, known locally as “Dick Turpin’s hideaway”, but is probably part of an old quarry showing good examples of blocky red-brown sandstone, with bedding structures and iron staining. Continue along the bridleway.
- 17. Turn left up the hill then bear right. 14 Note the pale sand in the path where iron has leached out. Compare this with the red sandy paths near Rushmere carpark.
- 18. At the brow of the hill, enter Rammamere Heath (SSSI) through the gate on the right.
- 19. Bear right then left following the path keeping to higher ground before descending and continuing through the heathers to a kissing gate. 15 Vegetation is dominated by heather, bracken and silver birch that tolerate the well-drained acidic soils of the Woburn Sands. Enjoy views to the left across the valley towards Bragenham and King’s Woods.
- 20. Leave the Heath through a grassed path area keeping woodland on the left. Keep straight on where the path narrows.
- 21. Go through the kissing gate. 16 Look right up the shallow, flat-bottomed valley, created in the Ice Age, leaving behind a layer of Boulder



7: Old quarry in copse



9: Great Brickhill boulders

Clay impeding drainage allowing a stream to flow towards the road after heavy rain. Turn left down the valley, go through the kissing gate, cross the road with care and arrive at Stockgrove Park Visitor Centre.

- 22. Continue past the café following the sign to the Sundial. 17 At the bottom of the hill, mole hills and rabbit burrows bring sandy soil to the surface but higher up there is Boulder Clay with chalky soil and flint pebbles.
- 23. Pass, on your right, the Sundial made of 14 sandstone blocks from a local quarry.
- 24. Continue ahead from the Sundial, following the path with fields on the right. Enter woodland with 18 dry valleys formed in the cold climatic conditions of the Ice Age, lined with pine trees and ferns, on the left. Bear right then left down to a gate, then follow signs to return to Rushmere car park.



10: Old Red Lion pub



15: The path across Rammamere Heath



17: The sundial



16: Dry valley